REMARKS

Reconsideration of the application in light of the amendments and the following remarks is respectfully requested.

Applicants appreciatively thank the Examiner for the courtesies extended during the June 19, 2007 telephone interview with Applicants' representatives Erik R. Swanson and Jennifer Ying. During the interview, the rejection of claims 1-20 under 35 U.S.C. §101 and §112, second paragraph, were discussed, as will be described below. The Examiner indicated that he would favorably consider the application for allowance upon appropriate amendments to the independent claims removing the references to data "representation" and reciting "compressing the data," amendments to the specification regarding the single Cauchy integral theorem, submission of a reference describing the theorem, and appropriate explanation of how an interpolation function is identified based on a sampling function.

Status of the Claims

Claims 1-20 are pending. Claims 1, 14, 16, 18, and 19 have been amended. It is respectfully submitted that no new matter has been added.

Information Disclosure Statement

An Information Disclosure Statement is submitted herewith for the Examiner's consideration.

Amendments to the Specification

Applicants have amended the Specification so that the Cauchy integral theorem is referenced as a single theorem, as described in paragraph 0005 of the Specification. Applicants respectfully submit that the amendments are minor in nature, and would have been apparent to one of ordinary skill in the art. As requested by the Examiner, applicants have enclosed herewith a definition of the

Cauchy integral theorem from Chapter 4.4 "Cauchy's Integral Theorem" from *Fundamentals of Complex Analysis with Applications to Engineering and Science, Third Edition,* by Saff et al. As described in Saff et al., on page 187, Cauchy's integral theorem is a single theorem. Applicants respectfully submit that no new matter has been added by the amendments to the Specification.

Rejection under 35 U.S.C. §101

Claims 1-20 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter.

As discussed in the June 19, 2007 telephone interview, Applicants have amended claims 1, 18, and 19 as suggested by the Examiner. Independent claims 1, 18, and 19 now recite a "method for compression of data" and "compressing the data using the interpolation function s(z)."

It is respectfully submitted that compression of data, as recited in claims 1, 18 and 19, is a useful, concrete, and tangible result, and provides a practical application. As discussed in the Specification in paragraphs 0002-0004, by providing efficient compression of data, transmission and processing speeds can be increased, for example in the field of image processing. Therefore, Applicants submit that the method recited in claims 1-20, as amended, provide a useful, concrete and tangible result, and have a real-world practical application.

In view of the above remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-20 under 35 U.S.C. §101.

Rejection under 35 U.S.C. §112, second paragraph

Claims 1-20 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner contends that lines 3-4 of claim 1 "are indefinite because they state that a two-dimensional interpolation function can be identified based on a sampling function." (Detailed Action, Item 2, page 2.) As discussed below, it is respectfully submitted that claims 1-20 are definite.

As discussed in the June 19, 2007 telephone interview, paragraphs 0013-0018 of the Specification set forth a description of how an interpolation function is identified based on a

sampling function. Specifically, paragraph 0013 of the Specification states that the interpolation functions s(z) "are holomorphic or meromorphic." As discussed in paragraph 0015, suitable interpolation functions s(z) are especially functions "having zeros at least over the set of sampling points z_j, except at point $z = 0$." As an example, the Specification describes the class of polynomial functions as being exemplary interpolation functions.

In paragraph 0016 of the Specification, the advantageous properties of the sampling function a(z) are described. In particular, the first property of the sampling function is that $a(z) = 1$ or another suitable constant, and the second property of the sampling function a(z) is that $a(z_j) = 0$, with $z_j \neq 0$ being a Gaussian integer. Paragraph 0018 of the Specification also describes a(z) as "having zeros at least at the sampling points."

Paragraph 0017 provides an equation which relates the interpolation function s(z) with the sampling function a(z). Namely, s(z) can be represented as $s(z) = \sum s_j \cdot a(z - z_j)$, where $s_j = s(z_j)$. *See*, Specification, paragraph 0012.

Thus, as noted above, for any given sampling function a(z), there will be a series of points where $a(z_j) = 0$, with $z_j \neq 0$. Further, a suitable interpolation function s(z) will have zeros at least over the set of sampling points z_j, except at point $z = 0$. Thus, one of ordinary skill in the art can recognize that an interpolation function s(z) for a given a(z) will also have zeros at the same points z_j. In addition, the interpolation function s(z) will also be a holomorphic or meromorphic function.

Accordingly, as described above, Applicants respectfully submit that an appropriate two-dimensional interpolation function s(z) can be identified based on a given sampling function a(z) by identifying an interpolation function s(z) that satisfies the above-described criteria. Thus, Applicants respectfully submit that the claim language of claim 1 is definite.

The Examiner also contends that that the feature of "a Cauchy integral theorem being applicable for the interpolation function" is unclear. (Detailed Action, Item 2, page 3.) As discussed in the June 19th telephone interview, it is known to those in the art that there is only one Cauchy integral theorem. *See*, Specification, paragraph 0005. Further, as noted above, Applicants have amended the Specification to be consistent in referring to the single Cauchy integral theorem, and have submitted herewith a reference setting forth a definition of the Cauchy integral theorem, as requested by the Examiner. Thus, Applicants submit that it is clear from the claim language that the

identified interpolation function s(z) must satisfy the conditions required for applying the Cauchy integral theorem, as described in the Specification in paragraphs 0013-0014.

In view of the above remarks, Applicants respectfully request reconsideration and withdrawal of the rejection to claims 1-20 under 35 U.S.C. §112, second paragraph.

CONCLUSION

Each and every point raised in the Final Office Action mailed April 20, 2007 has been addressed on the basis of the above remarks. In view of the foregoing it is believed that claims 1-20 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Dated: June 20, 2007

Respectfully submitted,

By E. R. Swanson

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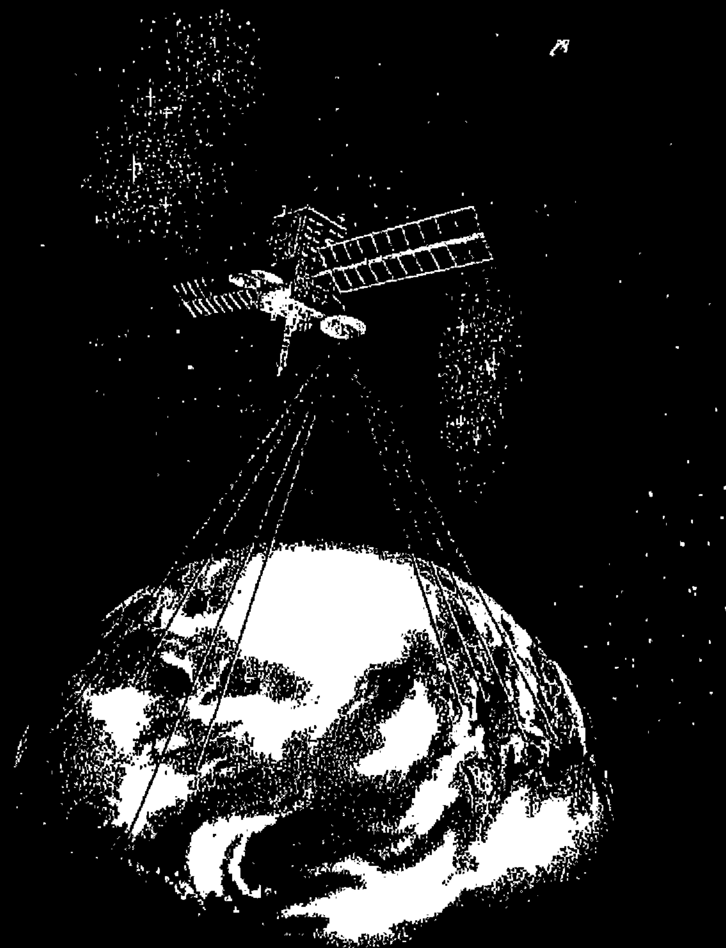

E. B. Saff · A. D. Snider